

11) If a bag consists of 3 red balls, 4 blue balls, and 2 green balls, what is the probability that you draw a red ball, and then, without replacing it, draw a blue ball?

12) Given a single draw from a standard 52-card deck, what is the probability that you draw a black card (spade or club) or an even card? (an even card is a 2, 4, 6, 8, or 10)

13). If the chance of raining on 3 consecutive days is 30% each day, what is the probability that it will rain on at least one of those 3 days?

14). You pay \$2 to play a game where you flip a coin and roll a die. You lose (win nothing) if the coin lands tails (regardless of what the die says), but if the coin lands heads, you win the amount on the die. What is the expected value of the game?

$$E(p_1) = \sum_{i=1}^8 p_i \cdot 1 = 10 \cdot 0.11 \cdot 0.11 = 1.5 \cdot 8 \cdot 10 \cdot 2 \cdot 0.1 \cdot 0.1 \cdot 0.1 = (5, 8)$$

$$d_1 = 1 \quad 5 \cdot 8 \cdot 10 \cdot 2 \quad (1.5 \cdot 8 \cdot 10 \cdot 2 \cdot 0.1) (1.5 \cdot 8 \cdot 10 \cdot 2)$$

$$505 =$$

15). You are given 9 to 1 odds against tossing three heads with three coins, meaning you win \$9 if you succeed and you lose \$1 if you fail. What is the expected value of this game?